

What is claimed is:

1. A black galvanized steel sheet comprising:
 - a galvanized steel sheet;
 - a black coating layer formed on the galvanized steel sheet;
 - a composite coating layer formed on the black coating layer and containing a phosphate ion, a vanadate ion, a metal ion, an α , β -unsaturated carboxylic acid and a glycoluril resin; and
 - an organic resin layer formed on the composite coating layer.
2. The black galvanized steel sheet according to claim 1, wherein the black coating layer is formed by a blackening treatment of the surface of the galvanized steel sheet.
3. The black galvanized steel sheet according to claim 1, wherein the black coating layer has a thickness of 0.01 to 0.5 μm .
4. The black galvanized steel sheet according to claim 1, wherein the composite coating layer has a coating weight of 0.02 to 1 mg/m².

5. The black galvanized steel sheet according to claim 1, wherein the metal ion in the composite coating layer is at least one selected from the group consisting of a magnesium ion, a zinc ion, a manganese ion, and an aluminum ion.

6. The black galvanized steel sheet according to claim 1, wherein the composite coating layer is formed by applying a treatment solution on the black coating layer, the treatment solution containing a phosphate ion, a vanadate ion, a metal ion, an α , β -unsaturated carboxylic acid and a glycoluril resin.

7. The black galvanized steel sheet according to claim 6, wherein the metal ion in the treatment solution is at least one selected from the group consisting of a magnesium ion, a zinc ion, a manganese ion, and an aluminum ion.

8. The black galvanized steel sheet according to claim 6, wherein the treatment solution contains the following components:

20 to 85 mass % phosphate ion,
0.5 to 20 mass % vanadate ion,
5 to 20 mass % metal ion,
2 to 60 mass % α , β -unsaturated carboxylic acid, and
1 to 20 mass % glycoluril resin.

9. The black galvanized steel sheet according to claim 1, wherein the organic resin layer is formed by applying one paint selected from the group consisting of a polyester-resin paint, a fluororesin paint, a vinyl-chloride-sol paint, and an acrylic-resin paint.

10. The black galvanized steel sheet according to claim 1, wherein the organic resin layer has a thickness of 0.1 to 4 μm .